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SOME OBSERVATIONS ON THE PRESENT POSITION

OF THE TUBERCULOSIS PROBLEM

IN

EDINBURGH AND LONDON AND THE MEANS OF DEALING WITH IT.

Thesis for the degree of M. D.

by

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The great increase in the study of sociological problems by the upper and middle classes, which has characterised the last decade of the 19th and the dawn of the 20th century, has had the effect of drawing attention to the terrible havoc caused by consumption.

Not only is it one of the chief causes of death in the community, but it is found to claim its victims chiefly from those in the wage-earning period of life; and both from this fact, and the fact of its causing a long period of sickness and incapacity for work, before death mercifully arrives on the scene, it is now more fully realised what an important factor this disease is in the social evils that lie at the heart of modern civilisation.

Although not strictly a "poor man's disease", it nevertheless draws the greatest number of its victims from among the ranks of the poor.

And this is only what we might expect, for we already know that its development and spread is favoured by mal-nutrition, and the absence of fresh air and sunlight, all of which conditions are associated with poverty and slum-dwellings; whereas its growth is retarded and may even be checked, by abundance/

abundance of good food, fresh air, and sunlight, the perquisites of the rich.

Unfortunately, from the lingering character of the illness and its tendency to incapacitate the bread-winner of the family from work, it often has the effect of dragging that family down into a lower social grade and placing it in a position favourable to its own growth and development. Thus a "vicious circle" is formed, the two forces - poverty and tuberculosis - acting and reacting on each other, the whole forming a picture so full of horror and pity, that it is no wonder the nation is at last awakening to the sense of its duty in stamping out, if possible, this scourge of the human race.

That the discovery of the Tubercle Bacillus as the essential cause of the disease, did not lead to the immediate advocacy of preventive measures by those entrusted with the health of the nation, may surprise those who know how successfully other infective diseases have been coped with.

The pathology of this disease we know is intricate; likewise the specific treatment of it; so that it is not remarkable that greater advances have not been made along these lines; but it is rather astonishing that/

that preventive measures have not been more generally adopted 27 years after Koch's discovery.

It is not that we have lacked the desire to exterminate the disease, nor that the necessary funds have not been forthcoming, but that our schemes have not been laid on a broad enough basis to grapple with the whole problem in all its social and economic, as well as its medical aspects.

The different bearings of the problem have been severally emphasised, and separate schemes have been devised to deal with each of these, but the various schemes have usually lacked cohesion among themselves, thus causing a weakening of the anti-tuberculosis forces as a whole through want of co-ordination and organisation.

Two schemes have however been evolved, quite separate and distinct in character, modelled on sufficiently broad lines to deal with the social as well as the medical aspects of the problem. Both have been in existence long enough for one to judge of their value and utility. They are :-

1. The compulsory Insurance System of Germany.
2. The Dispensary System as started in Edinburgh.

I. The Compulsory Insurance System was inaugurated in/

in Germany in 1881 by the Emperor William I. By this system all workmen in Germany are compelled to insure themselves against illness of all kinds, so that there is nothing to hinder men seeking advice and getting examined at the first signs of illness, as there is in this country. Thus Pulmonary Tuberculosis is often caught in the very early stages and fewer patients come for advice for the first time showing signs of advanced disease. This in itself is ^avery beneficial thing, but the scheme goes further, for the Insurance Companies, finding it to their interest to cure all such cases on their books as soon as possible, have built large numbers of Sanatoria all over the country and as soon as the disease is diagnosed, the patients are sent to Sanatoria till they are cured or the disease is pronounced arrested.

In the meantime, while the bread-winner of the family is undergoing treatment, his wife and children are taken care of by the Insurance Company, so that the patient himself is freed of all care and worry on their behalf, and has not the inclination to discharge himself from the Sanatorium and go back to work before he is medically fit to do so.

This universal Sanatorium treatment has also a marked/

marked educational influence, as has been proved in this Country too.

There is no doubt that the German scheme is a very good one, but very peculiar^{to} and characteristic of Germany, and it is doubtful whether it could be transplanted into this country without such alterations in our economic conditions as we are not yet ripe for.

2. The other scheme I have referred to, had its birth-place, like many^{another} advance in Medical knowledge and practice, in Edinburgh, and it is the purpose of this Thesis to consider the way in which this system meets all the requirements of the problem in Edinburgh, and also the possibility of controlling the amount of tuberculosis in other large centres such as London by the extension of the same system to those centres.

My reason for choosing this subject is that I have been intimately connected with this scheme in Edinburgh since graduation, having held appointments under Dr. Philip, the originator of the scheme, both as Resident Physician at the Royal Victoria Hospital for Consumption, and also as Assistant Medical Officer at the Dispensary itself, and that on its being decided to introduce the same scheme into London last year, I was appointed the Medical Officer of the "Paddington Dispensary/

Dispensary for the Prevention of Consumption" - the first of its kind in the Metropolis.

EDINBURGH.

One of the great sources of tuberculous infection in Edinburgh is undoubtedly the character of its slums, and especially those in the historic Old Town. It would seem a pity from an antiquarian point of view to alter in any way the character of these houses, closes and streets, but unhappy is the City which is blessed with historic slums! Every one of these closes off the High Street, Cowgate and Canongate has its long tale of deaths from Consumption.

I know one house in particular which is a veritable death-trap. It stands in a road leading off the Canongate, and no fewer than 35 cases have already come under the notice of the Dispensary - all from this one house! I know of a young healthy, newly-married couple who took up their abode in this house, and both of them were very soon victims to this disease.

The very character of the Edinburgh slums, shut in as they are on all sides by the tall buildings of the more modern streets e.g. George IV Bridge and South Bridge, prevents them from getting a free supply/

supply of fresh air and sunlight.

I should say from personal observation, that the children of the Edinburgh slums are very much exposed to tuberculous infection and perhaps more so on the average, than are the slum children of most other cities.

Several causes are I believe at the root of this evil. In the first place; the houses are almost entirely built on the tenement system, which means that the children are turned out to play in the streets and on the common-stairs. Now the streets in Edinburgh are notably dusty, especially at certain times of the year, due to the frequency of keen winds which quickly dry the mud of the streets and raise the dust. Also the common stairs are only too frequently dark and insufficiently ventilated. The spitting-nuisance is I think universally agreed to be especially bad in Edinburgh. The tenement system again leads to a large population being crowded into a small ground area, therefore the amount of spitting on any particular area of road must be greater than on roads in which the houses and population are more spaced out. Here then we have a combination of agencies /

agencies which, I think, tend to make the risk of infection in the Edinburgh slums worse than elsewhere. There is a large amount of expectoration lying about on the roads and common stairs. This is dried very rapidly in the roads and raised in clouds of dust, whereas in the stairs the Tubercle Bacilli find all the conditions favourable for retaining their vitality in a saprophytic existence.

There seems to be considerable doubt as to the frequency with which Pulmonary Tuberculosis occurs in School-children, or at least as to the amount of disease which can be diagnosed during life. The general mortality of children at school ages from Pulmonary Tuberculosis is 3:10,000 and assuming that there are ten living cases for every death, as some suppose, then three out of every 1000 school-children in the British Isles are affected with Pulmonary Tuberculosis, or one in every 333.

Drs. Lechy and Horton of Brighton "exhaustively examined" 806 children, of ages from 4 to 17 years, and only found three cases of phthisis among them. At Dundee, Dr. A. P. Low examined 517 children and found no pulmonary tuberculosis. At Dunfermline, Dr. Ash found no pulmonary tuberculosis in 1371 children. Prof./

Prof. Haig in Aberdeen, found three cases in 600 children.

Now let us turn again to Edinburgh and we find that Dr. Mackenzie found 14 cases in 600 children, and the Charity Organisation Society found 19 cases in 1318 children.

But that is not all. I had the privilege of accompanying Dr. Philip and taking notes down for him while he examined a large number of children at all ages in several of the Elementary Public Schools in Edinburgh, and I shall quote the astonishing result of his examination in his own words :-

"The groups of children were selected at random by
"head-masters as representative of different ages, and
"strictly without any reference to supposed delicacy
"or otherwise. In judging the cases, I made use of
"three simple definite tests. In every case the
"tests were applied by myself, and the results care-
"fully noted by a colleague.

"The tests included - (a) Palpation, for
"evidence of glandular enlargement in the Cervical
"and Supra-clavicular triangle.

"Only cases showing at least a dozen such enlarged
"glands were included as positive. (b) Percussion
"of/

Town.	Examiner	No. of children examined	No. of cases	Proportion.	%
EDINBURGH	Dr. Mackenzie	600	14	1 : 43	2.3
"	C.O.S.	1318.	19	1 : 69	1.4
"	Dr. Philip	-	-	-	30.0

But as a matter of fact we know from post-mortem statistics that at least 30% of individuals, some say more, are infected with Tuberculosis, and it only rests with the powers of a physician whether this can be detected or no. Prof. Naegeli at Zurich, found in autopsies of children aged 1 - 5 that 17%, and of children aged 5 - 14 that 33% had tuberculous lesions.

Dr. Thomas Harris of Manchester (1889) taking the deaths of persons over 20 years of age who died in the Manchester Royal Infirmary found healed phthisis ("involved tuberculosis") in about 38% of the post-mortem examinations made by him.

Prof. Hughes Bennet says :- "In 1845 I made a series of observations with reference to the cretaceous masses and puckerings so frequently observed at the apices of the lungs in persons advanced in life. The conclusion arrived at was, that the spontaneous arrestment/

"arrestment of tubercle in its early stage occurred
 "in the proportion of from one-third to one-half of
 "all the individuals who die after the age of forty.
 "The observations of Rogee and Boudet, made at the
 "Saltpetriere Hospital in Paris, amongst individuals
 "generally above the age of seventy, showed the
 "proportion in such persons to be respectively one-
 half and four-fifths."

I need not quote more, though other great and distinguished pathologists have noted similar results.

If now we arrange the above results in a table along with Dr. Philip's observations, the latter do not appear so remarkable.

Physician or Pathologist.	Ages	Percentage diagnosed during life	Percentage found after death.
Philip	7-15	30%	
Naegeli	1-5		17%
"	5-14		33%
Harris	20		38%
Hughes			
Bennett	40		30 - 50%
Rogee	70		50%
Boudet	70		80%

The large percentage of children diagnosed as tuberculous /

tuberculous by Dr. Philip is strikingly corroborated by the following statistics drawn from Children's Hospitals :-

1906. Belfast Hospital for Sick Children.	{ No. of intern patients, 827 No tuberculous, 26.10 %
1906. Ulster Hospital for Sick Children.	{ No. of intern patients, 247 No of tuberculous, 30.36 %
1905. Great Ormond Street, London.	{ No. of intern patients, 2,876 No tuberculous, 27 %
1906. Royal Edinburgh Hospital.	{ No. of intern patients, 1,968 No tuberculous, 20 %
1905. Manchester Children's Hospital.	{ No. of intern patients, 1,999 No tuberculous, 21.3 %
1905. East London Children's Hospital.	{ No. of intern patients, 2,054 No tuberculous, 24.3 %
1906. Glasgow Children's Hospital.	{ No. of intern patients, 1,777 No tuberculous, 27.95 %

In connection with this, it is interesting to note that out of 16,539 consecutive cases of all ages, who have attended the Royal Victoria Dispensary, no fewer/

fewer than 1917 were in children below 15 years of age, that is 11.5%.

The large percentage of children affected with Pulmonary Tuberculosis is most interesting as showing what a large number of these cases progress to a satisfactory cure by natural means, and should stimulate us to do our best to assist Nature by placing the children under the best possible hygienic conditions, both in the schools and in their own homes.

It is a famous quotation from Hippocrates, that says "Phthisis, if treated early enough, gets well."

Coates, after giving an account of 131 consecutive autopsies at the Glasgow Royal Infirmary, says :
"It appears that, taking even the most serious forms of internal tuberculosis, such as Consolidation of the lungs, tuberculous disease of the vertebrae, tuberculosis of the peritoneum, there is evidence that spontaneous recovery takes place in a proportion equal to that in which death occurs."

This brings us back to the paramount necessity of an extensive organisation such as the Dispensary Scheme, for detecting early cases in the curable stage/

stage, and if necessary sending them to Sanatoria for a period, where they will be placed under the best possible conditions and where Nature will be given every facility for bringing about a thorough and permanent cure of the disease.

In Edinburgh we have such a scheme in the Royal Victoria Dispensary which was founded in 1887.

I will give the programme of this Dispensary in Dr. Philip's own words :-

1. The reception and examination of patients at the dispensary, the keeping a record of every case, with an account of the patient's illness, history, surroundings and present condition, the record being added to on each subsequent visit.
2. The bacteriological examination of expectoration and other discharges.
3. The instruction of patients how to treat themselves and how to prevent or minimise the risk of infection to others.
4. The dispensing of necessary medicines, sputum bottles, disinfectants, and, when the patient's condition seemed to warrant it, foodstuffs and the like.
5. The visitation of patients at their own homes by (1) a qualified medical man, and (2) a specially trained/

trained nurse, for the double purpose of treatment and of investigation into the state of the dwelling and general conditions of life and the risk of infection to others.

6. The selection of more likely patients for hospital treatment, either of early cases for Sanatoriums or of late cases for incurable homes, and the supervision, when necessary, of patients after discharge from hospital.

7. The guidance, generally, of tuberculous patients and their friends, and for inquiries from all interested persons on every question concerning tuberculosis.

This dispensary is closely associated with a Sanatorium of 100 beds on the confines of the City, i.e. the Royal Victoria Hospital for Consumption at Craigmyleith.

The City Authorities have set apart 50 beds in the City Fever Hospital at Colinton Mains for cases of Advanced Phthisis, so that this Dispensary is able to isolate dangerously infective cases.

Further the Dispensary works in close connection with the Medical Officer of Health for the City, so that all cases are notified to him and where necessary the/

the dwellings are disinfected by his department.

In this manner, all the various elements which individually have proved to be insufficient, are organised into one homogeneous whole, with the dispensary as its headquarters and general clearing house.

Besides these important functions, the dispensary also acts as an Information Bureau or Intelligence Department for all matters relating to tuberculosis. Acting in conjunction with the Medical Officer of Health, it collects various statistics which throw a most important light on the method of dealing with the disease. Thus it finds out those parts of the town in which the disease breeds. It tells you the type of street or house most favourable to its growth. It gathers information as to the trades and occupations which most predispose to infection. It shows the high percentage of domestic infection, and the danger caused by infected families continually changing their residence. It illustrates the social and economic side of the problem and demonstrates the effect the disease has in producing poverty, or the effect poverty has in fostering the disease.

In fact there is no end to the information the dispensary/

dispensary can accumulate and distribute in relation to tuberculosis.

Perhaps the dispensary's most important function however, is the domiciliary visitation and examination of "contact" cases.

It has always been recognised as an unfortunate fact, that cases do not as a rule consult a doctor until the disease is so far advanced that there can be no hope of a cure. Especially is this the case when the patient happens to be the bread-winner of the family.

Many of these families live in a hand-to-mouth manner, year in and year out, with literally one foot in the work-house, and in such conditions the bread-winner can often not even afford the time to be examined, and if he can, he is afraid that he will be told to stop work and take to his bed for a time, which he knows means starvation.

With a properly organised Dispensary scheme, such a case is referred to one or other Charitable Agency, who can support him and, if necessary his family during his illness, and the patient's family are medically examined by the Dispensary Doctor, so that/

that very often really early cases can be discovered and immediate steps taken to cure them of the disease or to arrest its progress, and prevent further infection.

The discovery and cleaning out of such "Tuberculous Nests" must eventually have a marked effect on the mortality of the disease in any given district. I hope to show with regard to Edinburgh, that these conclusions are fully born out by facts.

Let us see what effect the working of this scheme has had on the mortality returns of Edinburgh, as compared with those of the other large towns of Scotland.

Giving the Dispensary ten years from its establishment in which to begin to have any appreciable effect on the death rate, let us compare the statistics from 1897 to 1907 :-

Death-Rate from Pulmonary Tuberculosis per 10,000 of population in the Principal Towns of Scotland ,
(1897, 1901, 1906).

	1897	1901	1906	Fall %.
ABERDEEN	16.7	13.9	12.2	26.9
DUNDEE.	22.3	17.2	16.9	24.2
GLASGOW.	20.3	18.5	15.6	23.1
GREENOCK.	20.7	14.8	13.2	36.2
LEITH.	21.2	19.2	12.7	40.09
PAISLEY.	17.8	16.6	12.8	28.09
PERTH.	22.1	16.1	17.9	18.09
EDINBURGH.	19.00	17.00	11.00	42.1

These figures are striking and naturally raise the question as to the cause of this pronounced fall in the death-rate.

It must be remembered in reading the above table that Leith, which shows the next most rapid fall in the death-rate to Edinburgh, has also been partially served by the Royal Victoria Dispensary.

It must also be remembered that the Dispensary Scheme was at first insufficiently understood and appreciated.

The dispensary has gradually evolved from its humble beginnings to its present position, its scope and the direction of its activities being steadily increased and widened. Thus, the Labour Colony, its latest expansion is about to be started.

Another factor which has perhaps prevented the fall in the Edinburgh death-rate from being even more pronounced than it has been is the fact that, although the City Authorities, acting on the recommendation of the Dispensary, set apart 50 beds in the Fever Hospital for advanced cases of Pulmonary Tuberculosis, there are still large numbers of cases who die in their own homes, sometimes even in a room occupied day and night by two, three or more relatives. /

relatives.

This is partly due to dying patients refusing to be taken away from their friends, and partly to the unfortunate fact that patients are allowed to take their own discharge from the Fever Hospital.

I have known several such cases. One man I know, took his discharge because he was made to have a bath! And I know several men who discharged themselves because they felt slightly improved in health and wished to do some work. It seems to me that such a state of affairs is absolutely antagonistic to the whole aim and object in setting apart such beds. A patient should no more be allowed out of the Fever Hospital in an advanced and highly infective condition of Phthisis, than should a Small Pox or a Scarlet Fever case. Such patients do more harm and spread more infection, I believe, than all the early cases put together.

Let us sum up now the conditions as regards the campaign against Tuberculosis in Edinburgh.

Edinburgh has the lowest mortality from Pulmonary Tuberculosis of any large town in Scotland.

The death-rate from this disease has been steadily falling from 1897.

The chief factors which militate against extinction/

extinction of the disease, and therefore the chief factors against which future measures should be directed, are :-

1. Advanced cases dying in their own homes in the slums, often in rooms occupied day and night by other people.
2. Cases considered sufficiently advanced and infective for an Isolation Hospital, being allowed to come out of their own accord and resume their occupations, or loafe about in Public Houses.
3. Pecuniary difficulties which prevent "bread-winners" from seeking advice earlier.
4. The character of the slums. Their sunken and shut-in position, their concentration, owing to the tenement system, into a small area, their dark and ill-ventilated common-stairs, their absence of other playgrounds for the children than the streets.
5. The prevalence of indiscriminate spitting.

On the other hand Edinburgh possesses an organisation fitted to deal with all aspects of the problem, which co-ordinates all the anti-tuberculosis forces, and which combines in itself all the measures devised for dealing with the disease, thus :-

1. Compulsory Notification is in force, and greatly assists in drawing attention to those tuberculous "nests" of which I have spoken.
2. Fifty beds are set apart in the City Hospital for advanced cases, for the purpose of Isolation.
3. There is a Sanatorium with 100 beds (The Royal Victoria Hospital) on the boundaries of the City, in close touch with the Dispensary, and suitable cases selected by the Dispensary can be admitted free of charge.
4. Many of these patients have suitable employment found for them on leaving the Sanatorium, and in any case they are kept in close touch with the Dispensary.
5. A Labour Colony is on the eve of being started, to which suitable cases will be sent in future, on leaving the Sanatorium.
6. The charitable Agencies are fewer in number, work better together and there is less "over-lapping."
7. The area and population is limited in extent and has not grown out of all bounds as it has in London, and the problem can therefore be more easily "stated" and dealt with.
8. At the centre of all this system there is the Dispensary/

Dispensary, which gives free advice to all-comers, sifts out the advanced from the early cases and sends them to either the Sanatorium or the Isolation Hospital, or else treats them at home. Visits their homes, teaches them how to prevent domestic infection etc., examines the families and gets hold of the early "contact" cases and generally acquires a large amount of valuable statistics and information.

It is not too much to say that Edinburgh possesses a most complete and perfect organisation for the Campaign against Tuberculosis, and that the prospects of exterminating the disease, or at least of getting it under complete control, in the future, are extremely bright.

LONDON.

Let us turn now to London and see what the present conditions are there and how they may best be dealt with.

The total population of London in the middle of 1907 was estimated to be 4,753,218, and from the Registrar General's Report we find that 8,988 persons died from all forms of tuberculosis in that year alone/

alone, that is to say a death-rate of 18.89 per 10,000 living.

Multiplying this mortality by 10, to represent the incidence, we come to the somewhat alarming conclusion that there are about 90,000 people suffering from this disease alone in the Metropolis.

Further we find from the same report that 2,372 children under the age of 15 died in London in 1907 from all forms of tuberculosis.

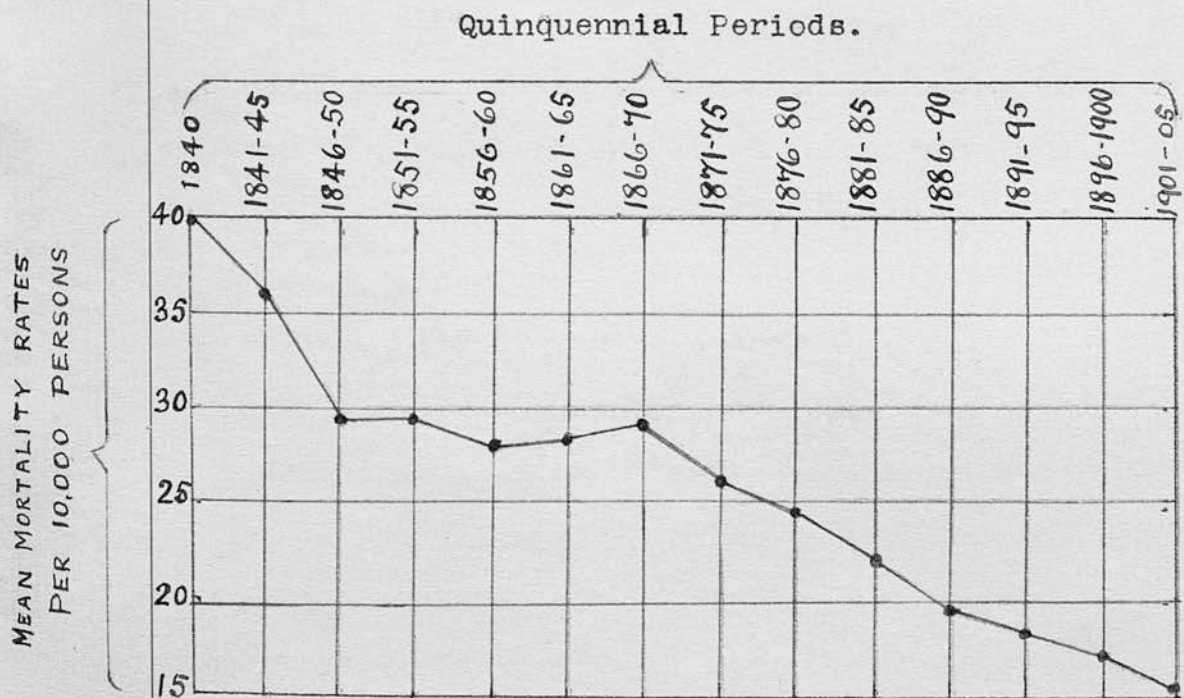
Of the 8,988 persons who died in London from all forms of tuberculosis at all ages, 6,515 died from Phthisis, of which 4,018 were males and 2,497 were females, or a death-rate from Phthisis of about 13.6 per 10,000.

Although the death-rate from all forms of tuberculosis and from Phthisis in London has not fallen so rapidly as it has done in Edinburgh, as I hope presently to show, it has fallen considerably during the last half century.

Quoting again from the Registrar General's Report, Dr. Tatham says :- "Both in 1905 and in 1907 the mortality from Phthisis was the lowest on record. In proportion to the living, the victims of Phthisis are now only half as numerous as they were half/

half a century ago. Between the decennium 1851 - 60 and the quinquennial period last ended there has been a fall of 70% in the mortality from this disease among persons of both sexes below the age of 25 years. From that age onward to the close of life the fall has been considerably less marked, and has been more pronounced in females than in males."

Diagram showing reduction in mortality from Phthisis in London from 1840 to 1905, at all ages :-



This fall in the death-rate from tuberculosis may be ascribed to the great improvement in the hygienic/

hygienic conditions of the poor as a result of the establishment of Public Health Departments in the various Metropolitan Boroughs and the laws passed from time to time dealing with over-crowding, sanitation, food inspection, etc. It has also been partly due to the improved hygienic conditions of schools, to the feeding of school-children, to the providing of open spaces, parks and playgrounds, and latterly perhaps to the provision by the L.C.C. of open-air schools for delicate children.

But it cannot to any large extent be ascribed to the existence of chest hospitals or dispensaries, which have in some ways rather tended to increase the amount of Pulmonary Tuberculosis than to diminish it, by prolonging the lives of infectious cases for a few months, without taking precautions against their infecting their families at home.

There has been practically no attempt made in London to deal with the problem in toto, as has been the case in Edinburgh. The various hospitals, dispensaries, sanatoria etc. have come into being perfectly independently of each other and there has been no central authority through which they might all co-operate. Nor has there been any real attempt to search/

search out the disease in the homes of the poor, or to prevent infection.

What has perhaps hindered co-operation of the various institutions in London more than anything, is what is known as the "Letter System." By this we mean that the various hospitals etc. are supported by Voluntary Contributions, and that every regular subscriber of a certain sum, or every donor of a certain sum to the funds of an Hospital is entitled to one or more letters of admission every year as the case may be. Each letter entitles the holder to the use of one bed for a certain period, commonly six weeks. When a poor patient wishes to get into an hospital he has first to obtain a 'letter' from a subscriber or donor, and then wait his turn on the list for admission.

It is easy to see how this system may be and is abused.

In the first place a suitable case may be unable to obtain a letter at all, or only after a long time, during which period he may go down-hill fast, and become an unsuitable case.

In the second place when an unsuitable case demands admission on the grounds of having a letter, the/

the hospital or sanatorium authorities hardly dare refuse him, for fear the Subscriber should transfer his subscription in future to another hospital where the authorities were not so autocratic.

A third abuse arising from this letter system, is that patients usually make a tour of the various hospitals, staying at each in turn for periods varying from one to three months, until they die.

It seems surprising, but it is nevertheless a fact, that this letter system is even carried out in connection with the Out-Patient Departments of Hospitals. A patient living in North London for instance may obtain a letter entitling him to attend the Out-Patient Department of the Brompton Hospital, which is South West, for three months.

Each attendance occupies him sometimes nearly the whole day, what with the time spent in travelling and in the waiting-room. At the end of three months, no matter what his condition may be, he must cease to attend unless he can obtain another letter.

Almost every Medical man I have spoken to on the subject is agreed as to the harm done by the letter system, and yet it seems as if the hospitals were unable to shake off this yoke.

The/

The hospitals which take in consumptive patients from London may be divided into two classes. There are first of all the old so-called Chest Hospitals which have been in existence for many years and which are generally situated in the Metropolis, and there are the more modern Sanatoria which are situated at long distances out of town.

Of the first class there are three important ones; i.e. Brompton Hospital for Consumption and Diseases of the Chest, the Royal Hospital for Diseases of the Chest, City Road, E.C.; and the City of London Hospital for Consumption and Diseases of the Chest, Victoria Park.

All these are old-fashioned hospitals, situated in populous districts where the open-air treatment is only imperfectly carried out, if at all. All three take in cases of Bronchitis, Asthma, Heart-disease etc., as well as Consumption, and moreover the Consumptive cases are not always separated from the others.

Of the second class, i.e. the true Sanatoria, the most important are (1) the Frimley Sanatorium, Surrey; (2) The Royal National Hospital for Consumption on the Separate Principle, at Ventnor in the Isle/

Isle of Wight; (3) The National Sanatorium for Consumption at Bournemouth in Hampshire; (4) The Maitland Cottage Sanatorium at Peppard Common in Oxfordshire; (5) The Maltings Farm Sanatorium at Naylands in Suffolk; (6) The Kelling Sanatorium at Holt in Norfolk; (7) The "National Association for the Erection of Sanatoria for Working Men's" Sanatorium at Benenden in Kent; (8) The Mount Vernon Hospital for Consumption and Diseases of the Chest, Hampstead, which includes a Sanatorium at (9) Northwood; and (10) the King Edward VII's Sanatorium at Midhurst in Surrey. The latter can hardly be included in this list, as the charges are so high that it is never used for the really poorer class of patients. That is to say there are nine Sanatoria with an aggregate of about 800 beds, and a glance at the map shows how far distant these are from London.

There are only four Sanatoria in the South of England which takes in patients at a cheaper rate than 30/- a week.

As for the Isolations Hospitals for Advanced Cases, these may with the exception of one or two small ones, such as the Firs Home at Bournemouth and the/

the Hospital of St. John and St. Elizabeth in St. John's Wood, be said to be non-existent; and certainly in comparison with the vast population of London the number of such beds is quite negligible .

I have not however mentioned the workhouse Infirmaries. These Institutions take in advanced cases together with early cases and a good number of consumptives die annually in them. But there is no attempt made to limit them to the purpose of Isolation Hospitals, and the patients are allowed to take their own discharge at pleasure. Besides, the number of beds in them available for advanced cases is considerably reduced by their taking in cases in all stages of the disease. These Infirmaries vary in quality in the different boroughs.

Some are good and others are bad. And it must be remembered too that they are ^{not} used solely for Phthisis, but that all sorts of diseases are admitted, and it is only in a few of them that there are separate wards for consumptives.

Each of the three London Chest Hospitals has a large Out-Patient Department, and Mount Vernon has an Out-Patient Department at Fitzroy Square, whilst the Fairlight Convalescent Home (a small home at Hastings)/

Hastings) has a large O.P. department at Margaret St. But all these out-patient departments, are as I said, run on the Letter System, and none of them attempt to search out the disease or to deal with home conditions. True, since the last International Congress on Tuberculosis at Washington, the Brompton Out-Patient Physicians have professed themselves willing to examine any contact cases which may be sent up to them, but how far this is from the ideal of the Dispensary!

There is only one Sanatorium which really selects suitable cases for itself and that is Frimley. This Sanatorium draws practically all its cases from Brompton Hospital and manages to exclude all but the most suitable. Mount Vernon and Northwood draw some of their patients from Fitzroy Square, but are considerably handicapped by the Letter System; while some of the other Sanatoria have Medical Referees (a mere farce); but on the whole all the Sanatoria with the exception of Frimley, find themselves deluged with unsuitable cases.

Most of the Sanatoria, with the exception of Frimley and Kelling completely lose touch of their patients after discharge. And even the above two are/

are able to do very little except in a few particular cases. There is no means of handing over discharged patients to the care of an institution when they return to town, where they may be looked after and possibly found work for. The result is that it is the rule to which there are very few exceptions, for these patients to begin to go down-hill again immediately.

The Borough of Woolwich has subsidised a few beds in the Maitland Cottage Sanatorium at Peppard Common in Oxfordshire and the M.O.H. of that Borough sends a certain number of early cases there, chiefly from the Arsenal, with very satisfactory results, but this, is, I think the only case in London where the M.O.H. of a Borough has Sanatorium beds available for early cases. Otherwise there is no relationship at all between the Public Health Department and the other agencies which profess to be working to the same end.

Of course the Medical Officers of Health are notified of all deaths from Phthisis and they sometimes arrange to have the rooms disinfected, but no further means are taken to prevent the spread of the disease.

In/

In future the Medical Officers of Health must be notified of all Poor Law Cases suffering from Pulmonary Tuberculosis and of all their movements, but a great deal is left to the initiative of each M.O.H. as to what steps he will take after notification.

Within recent years Health Societies have been formed in many of the Buroughs. These are Committees of Voluntary Workers, mostly ladies, which vary considerably in their usefulness. In some cases these Health Societies have Sub-Committees for dealing especially with Phthisis. The Phthisis Committees endeavour to act as Collecting and Distributing centres and as Educational bodies.

That is to say, they obtain Hospital and Sanatorium letters for patients and they do a certain amount of visiting and try to advise patients to keep their windows open etc., but they are purely non-medical and have no means of discovering cases in the early stages of the disease, nor have they any settled policy on which to work, such as the true relationship of the Sanatoria, Isolation Hospitals, Infirmaries, etc to each other, but merely stumble along in the dark, sending advanced cases to Sanatoria, keeping early/

early cases at home, and when in doubt sending patients to the Infirmarys.

Another non-medical charity is the Invalid Childrens' Aid Association. This body has branches in the various Burroughs, and as the name implies it deals with all classes of invalidism in children.

An important branch of their work however is connected with Phthisical or otherwise Tuberculous children, and here their policy seems to be even more simple than that of the Health Societies; it is to send every child, as soon as it is pronounced tuberculous, away to the country. The fact is quite ignored that the children cannot remain idle all their lives, nor grow up without education as a useless burden to the State, nor that sooner or later they must come back to their homes in the slums and live with closed windows, on perhaps a quarter the amount of food that they have been used to.

By far the most important of the non-medical agencies which are interested in the Tuberculosis Problem however, is the Charity Organisation Society. This society has branches in all the Burroughs and is controlled by a central organisation. Their aims/

aims and objects, as also their methods are too well-known to require any description.

They deserve all praise for having, during the last few years made a conscientious attempt to study the various aspects of the problem. At the Central Office there is a Medical Sub-Committee of which the Secretary is Lieut-Col. Montifiore and the Ass. Sec. is Capt. Morse. Both these gentlemen have evinced a personal and intelligent interest in the Phthisis question, and their opinion on the matter is most valuable from the fact of their expert knowledge of the social conditions of London's poor.

The C.O.S. have realised the importance of sending only really early cases to Sanatoria, and they have accordingly appointed a Medical Referee, to examine all cases that they propose to furnish with Sanatorium "Letters", with instructions to select only those in the very earliest stages of the disease.

This has led to a considerable amount of jealousy among other physicians in London who learn with indignity that cases they have recommended for Sanatorium treatment have been rejected by the C.O.S. Medical Referee. But undoubtedly it is a step in the /

the right direction, and I only hope that the C.O.S. will be able to show in their statistics a large percentage of "cures", as a reward for their conscientiousness.

Hitherto the Charity Organisation Society have drawn rather a hard and fast line between the "Deserving" and the "Undeserving" cases and have refused to help the latter in any shape or form; but I think they are beginning to realise that when men have been out of work through apparent slackness, the cause may often have been fatigue and lack of energy due to the presence of unsuspected phthisis; also that in a general campaign against Tuberculosis, the undeserving must be helped as well as the deserving for the sake of the whole community and more especially in order to prevent infection of their wives and families.

All these institutions and societies in London have been started independently and without any co-relation to each other. For instance the various Sanatoria have been started without any intention of their forming an integral part of a definite scheme, and so long as their Annual Reports meet with the approval of their Subscribers, that is all they care/

care. Again, the Charity Organisation Society, admirable though its work is, has no definite policy to pursue with regard to the Tuberculosis Problem, which it meets face to face at every turn.

The result of this lack of cohesion between the Anti-Tuberculosis Forces, has been much over-lapping, many abuses, much waste of money, and very poor results.

What is wanted in London is the establishment of a Co-ordinated system on the lines of the Edinburgh Scheme with a dispensary in each district which will act as the focussing and uniting point of all the existing forces. Through this office all the agencies will come into relation with each other and each will be able to do its work more completely and thoroughly.

The Sanatoria, Isolation Hospitals, Labour Colonies and Relief Agencies etc. may be compared with the Cavalry, Infantry, Artillery, Engineers and other sections composing an army, and will work in conjunction with each other through the Dispensary, just as the various sections of an army do through the headquarters staff. Further, the Dispensary, will also act as the Intelligence Department, and it will be from the information gathered here that all/
all/

all future plans and developments may be conceived.

Each district cannot have a Sanatorium of its own, but each district can and should have a dispensary, which can have beds at its disposal in the existing Sanatoria.

The building of Isolation Hospitals for Advanced cases is an immediate necessity, and each Dispensary should have a certain number of such beds available.

Patients residing in any particular district should be referred to the Dispensary in that district when discharged from Sanatoria.

The Dispensary in each district should be open to examine and give advice to all people suffering from this disease who reside in that district.

Each Dispensary should set definite boundaries to the district it proposes to serve, and no patient should be taken from outside those boundaries.

Patients coming for advice to one Dispensary from another district which has a Dispensary of its own, should be handed over to that Dispensary, in order to avoid all over-lapping.

The Dispensaries should be quite free of the letter system and patients should be able to consult the Dispensaries whenever they like without having to/

to wait until they obtain a "letter".

All cases attending a Dispensary and found to be suffering from other diseases but not from Tuberculosis should be handed over to the general Hospitals or to Private Practitioners, and vice versa, it should become the custom for the Private Practitioners and the general Hospitals to refer cases of Tuberculosis occurring in poor patients to the Dispensary of the particular district in which those patients reside.

In order to stimulate co-operation between the Private Practitioners and the Dispensaries it is most important that the latter should refer patients who have come for advice back to their own Doctors, if they are found to be already under Medical Supervision.

The Dispensaries should work in close co-operation with the Charity Organisation Society and if possible get material relief for patients requiring it only through the C.O.S. after the usual enquiries. By this means all over-lapping, of which there is already too much, in the matter of Charity, will be avoided.

Again, the existing Health Societies and Phthisis Committees might be utilised by forming Joint Visiting/

Visiting Committees consisting chiefly as at present of ladies, who will undertake the visiting of necessitous cases under the supervision of the Medical Officers of the Dispensaries.

The Dispensaries must also be Educational Centres, and public interest should be aroused by means of lectures, pamphlets, etc.

The public must be educated to the fact that the mere sending away of all consumptives to Sanatoria does not deal with the whole problem; that it does nothing to prevent the disease, but merely attempts to cure it; that many consumptives could and should pursue their occupations at home; and that the present system merely creates a large and idle class, and tends to swell the ranks of the unemployed.

I have mentioned already the satisfactory fall in the mortality from Phthisis in Edinburgh since the establishment of the Dispensary System in that City. Let us now compare that fall with the fall in London during the same period. I will quote again from Dr. Philip's Washington Address at the International Congress on Tuberculosis in 1908.

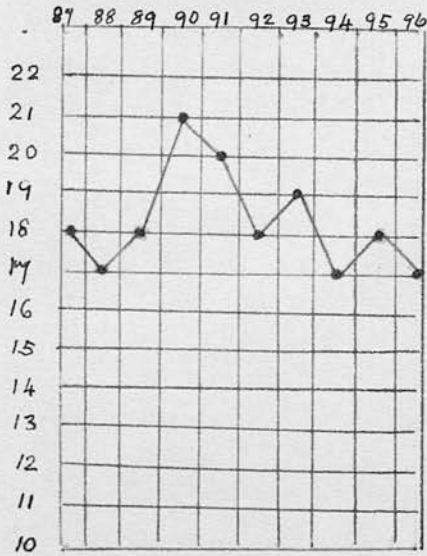
"The accompanying chart illustrates several points of interest in relation to tuberculosis during the/
the/

"the past twenty years.

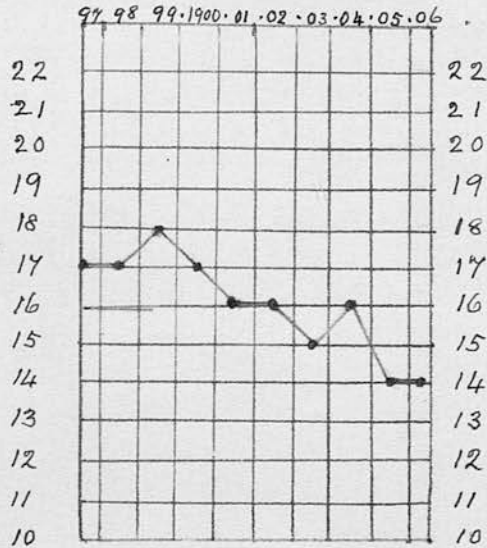
"I have selected that period for the reason,
 "first, that it represents approximately the time
 "during which more definite efforts have been made
 "in any country against tuberculosis. In the
 "second place, the twenty years happen to correspond
 "with the activity of the Edinburgh organisation,
 "which commenced with the establishment in 1887 of
 "the Victoria Dispensary for Consumption".

Death-rate from Pulmonary Tuberculosis in London,
from 1887 to 1896 and from 1897 to 1906.

(Thirty-fifth Annual Report of Local Government Board.)



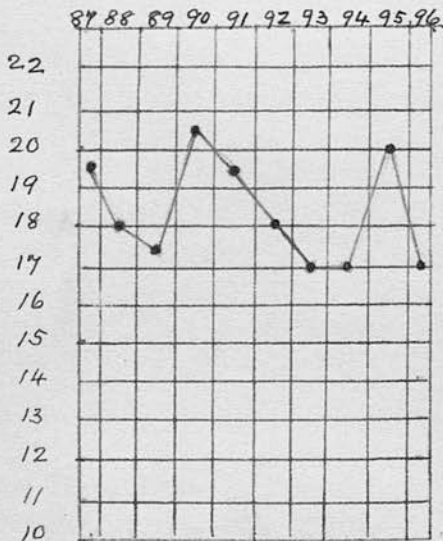
Fall per 10000 = 1; Percentage Fall, 5.5



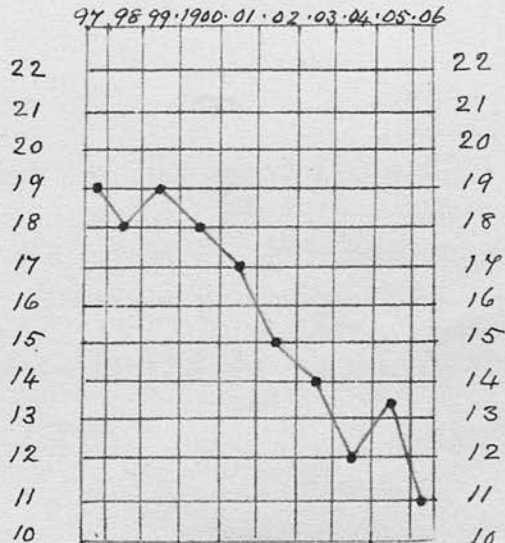
Fall per 10000 = 3; Percentage Fall 17.65

Death-rate from Pulmonary Tuberculosis in Edinburgh,
from 1887 to 1896 and from 1897 to 1906.

(Edinburgh Health Report, 1906.)



Fall per 10000, } Percentage Fall,
2.5 } 12.82



Fall per 10,000, } Percentage Fall,
8 } 42.1

"The charts show the curve of mortality from
 "pulmonary tuberculosis for London and Edinburgh respect-
 "ively. I have divided the periods into two periods
 "of ten years each. During the first of these periods,
 "necessarily the direction of anti-tuberculosis effort
 "was rather indefinite. Even when anti-tuberculosis
 "effort had assumed more definite shape, time was
 "needed before the effect of effort began to register
 "itself in the death-rate."

"The curves are interesting in both cases. They
 "illustrate sufficiently what has been frequently
 "pointed out - namely, the steady improvement in
 "relation to tuberculosis which is in progress in
 "many centres."

In the case of Edinburgh, I think, without
 "straining the point, the curve affords significant
 "evidence of the influence exercised on tuberculosis
 "by the institution of organised and co-ordinated
 "effort."

"In addition to less definite agencies, there has
 "occurred in Edinburgh from 1887 onwards the gradual
 "evolution of an anti-tuberculosis scheme, including
 "the Dispensary, with its system of domiciliary
 "visitation, etc., the Sanatorium, the Hospital for
 "advanced/

"advanced cases, the Working Colony, and finally
"Compulsory Notification."

"The charts show how, from 1887 onwards, the
"mortality from tuberculosis has fallen progressively.
"The Edinburgh fall during the latter ten years is
"especially striking. It is quite out of proportion
"to that of the precedent years, and remarkably more
"rapid than that shown in the London curve. It seems
"fair to associate this to some degree with the devel-
"opment of the completer organisation."

In conclusion I may say that in January of this
year (1909) a start has been made in London, by the
establishment in Paddington of the "Paddington
Dispensary for the Prevention of Consumption", of a
scheme modelled exactly on the lines of the Royal
Victoria Dispensary, Edinburgh.

The Committee of this Dispensary circulated a
printed appeal describing the object of the Dispensary,
in which they say:-

"We propose to try and start a Dispensary exclusively
"for cases of Tuberculosis in the Borough of Padding-
"ton, to be under the general Supervision of the
"Medical Officer of Health for that Borough."

"The model we have taken is the Royal Victoria
Dispensary/

Dispensary for Consumption, Edinburgh founded by Dr. R. W. Philip in 1887."

In this appeal they also mention the programme of the Dispensary as follows and it will be seen that this is exactly identical with that of the Edinburgh one.

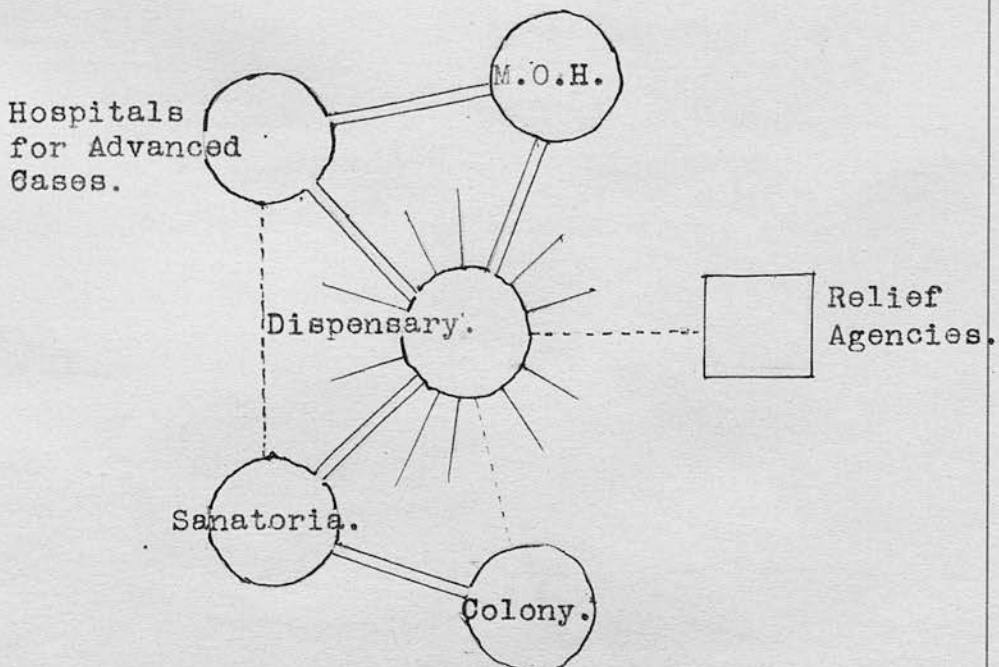
1. The reception and examination of patients at the Dispensary, the keeping a record of every case with an account of the patient's illness, history, surroundings and present condition, the record being added to on each subsequent visit.
2. The bacteriological examination of expectoration and other discharges.
3. The instruction of patients how to treat themselves and how to prevent or minimise the risk of infection to others.
4. The dispensing of necessary medicines, sputum bottles, and where the patient's condition seemed to warrant it, food stuffs and the like.
5. The visitation of patients at their own homes by (1) a qualified medical man, and (2) a specially trained nurse, for the double purpose of treatment and of investigation into the state of the dwelling and/

and the general conditions of life and the risk of infection to others.

6. The selection of more likely patients for hospital treatment, either of early cases for sanatoria, or of late cases for Incurable Homes, and the supervision, where necessary, of patients after discharge from Hospital.
7. The guidance generally of tuberculous patients, and their friends, and for enquiries from all interested persons on every question concerning tuberculosis.

They also publish the following diagram taken from Dr. Philip's address on the "Public Aspects of the Prevention of Consumption".

Relation of Dispensary to other Factors in the
Anti-Tuberculosis Campaign.



The Dispensary has been in operation now for just over three months and already over 250 cases have come under its notice.

Its advent was welcomed by all anti-tuberculosis workers in the neighbourhood and from the beginning it has been able to co-operate with the M.O.H. of the Borough who is the Chairman of its Committee, with St. Mary's Hospital (the general hospital of Paddington), with certain Sanatoria, with the Health Society, and with the Charity Organisation Society. Capt. Morse, the Ass. Sec. of the Medical Sub-Committee of the C.O.S. speaking at a public meeting held in Kensington last month, to consider the advisability of starting a Dispensary in that Borough on the lines of the Paddington Dispensary, said :-

"I have been working at this subject for the past ten years, and the establishment of this Dispensary in Paddington has been the one ray of hope I have seen during the whole of that time."

As far as one can see the conditions in London seem ripe for the universal establishment of a co-ordinated and scientific scheme for the campaign against tuberculosis on the lines of the Dispensary system.

I believe that the idea will grow and that in the course of the next few years Dispensaries will be established in all the Burroughs, and that this measure will be followed by a still further and more rapid fall in the mortality from this disease.

When the time comes, if it ever does, that tuberculosis is only a thing of the past, future generations will give the credit for its extinction to the founders of that scheme which grappled with the entire problem and attacked the evil at its root.